THE GENUS ENOPLOCLYTIA IN THE CRETACEOUS ROCKS OF QUEENSLAND.

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(Plates xxiii. and xxiv.)

Comparatively few Crustacean remains have, so far, been found in the Cretaceous of Queensland, or for the matter of that throughout Australia generally. A short note by myself, published in 1892 gives details of all that was known up to that date.[1] Emphasis is there laid on the occurrence of both the Macrura and Brachyura.

The Trustees have, from time to time received from Mr. W. H. Blomfield collections of Queensland Cretaceous fossils collected by him. In a series received some time ago occurred a specimen of great interest being the greater portion of a Macruran carapace apparently referable to *Enoploclytia*, McCoy.

The specimen consists of the carapace less the rostral portions, and all appendages. It is sharply bent down along the dorsal median line, leaving the lateral portions but very little convex, indeed the entire body may be said to be highly compressed; on the right side the ventral margin is fairly well preserved, but on the left it is wanting. The general outline of this carapace is long-oval, and in its present compressed condition rather broadly pod-shaped, the entire surface being highly tuberculate. The posterior margin is only preserved towards its ventral lateral portions which are rounded.

The nuchal furrow is deep, wide, devoid of tubercles and faintly sigmoidal on each half of the shield, curving forwards on approaching the ventro-lateral margins and running parallel to the latter forwards for a short distance. At about the middle of its course there is a short open supplementary groove directed forwards. The mesobranchial furrow, like the nuchal, is deep, devoid of tubercles, but not so wide, and is double, one groove behind the other, but close together

[1] Etheridge—Proc. Linn. Soc. N.S. Wales, vii. (2), 1892, p. 305.

The anterior of these curves towards the nuchal on each carapace half, gradually lessening in conspicuousness but still reaching the nuchal just before its anterior turn forwards. The posterior mesobranchial is continuous across the entire carapace from margin to margin, distinctly sigmoidal, and deep at its extremities, faint and somewhat concavely curved in its median portion on each half of the carapace; these two principal furrows, the mesobranchial and nuchal are united immediately above each latero-ventral margin by a short transverse furrow tending to separate off and helping to form the small epibranchial lobes. The cephalic lobes, anterior to the nuchal furrow are, accepting the nuchal as a base line, obtusely triangular and highly scabrous, the tubercles large and close. The mesobranchial lobes enclosed between the furrows of the same name and the nuchal are roughly parallelogramatic, the tubercles resembling those of the cephalic lobes.

Between the mesobranchial and epibranchial lobes occur two small more or less round, or pear-shaped lobes formed by the junction of the anterior mesobranchial furrow above and the posterior below with the nuchal.

The large branchial region is highly scabrous, but the tubercles are certainly smaller than those of the cephalic or mesobranchial portions.

The genus *Enoploclytia* was established by McCoy[2] to receive the well-known *Astacus leachii*, Mantell, of the Lower Chalk. The absence of the rostral portions in the present specimen is unfortunate, as here are situated some of the principal parts relied on by McCoy for the separation and support of his genus. However, the double branchial furrows (here termed mesobranchial after Prof. T. Bell) described in *Enoploclytia*, are unmistakably present in the Queensland Crustacean, and although McCoy's figure is a more or less diagramatic one, the furrows in question are well shown. It is in the figures of Reuss, Geinitz, and Fritsch and Kafka that similar characters to those of our specimen are so apparent.

[2] McCoy—Ann. Mag. Nat. Hist., iv. (2), 1849, p. 330, fig.

In Reuss' illustration,[3] not only is the double mesobranchial furrow shown but also the epibranchial lobes. These features are even better displayed in Geinitz's figure,[4] and equally well also in that of *E. ventricosa*, Meyer.[5] It appears to me, judging from the figures quoted, that the form and degree of development of the epibranchial lobes form good characters for specific separation, at any rate in the absence of the rostral and other appendages.

The original figures of *Astacus leachii* by Mantell[6] and Bell[7] are almost wholly those of the chelæ and are therefore of no assistance at present, but relying on the figures of Reuss and Geinitz and more particularly the beautiful illustration by the latter, our form, which I purpose calling *E. terra-reginæ*, would appear to possess a greater development of supplementary lobes in the meso-epibranchial region; other than this it is unquestionably very close to *E. leachii*.

To some extent there is a resemblance to another Cretaceous genus *Phlyctisoma*, Bell,[8] but the presence in this genus of a mesogastric lobe enclosed within the bifurcation of the mesial longitudinal sulcus at the anterior end of the carapace at once tends to distinguish one from the other.

Loc.—Barcoo River Watershed, South Central Queensland.

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[3] Reuss—Verstein. Böhm. Kreideformation, Abth. 1, 1845, pl. vi., fig. 2.

[4] Geinitz—Charakter. Schichten Petrefacten säch. Kreid., 2 heft, 1840, pl. ix., fig. 1.

[5] Meyer—Fossiler Krebse, 1840, pl. iv., fig. 29 a and b.

[6] Mantell—Foss. S. Downs, 1822, pl. xxix., figs, 1, 4, 5.

[7] Bell in Dixon—Geol. and Foss. Sussex, 1850, pl. xxxviii*, figs. 6 and 7 (as *Palæastacus macrodactylus*, Bell.)

[8] Bell—Mon. Foss. Malacostracous Crust. Gt. Brit., pt. ii., 1862, p. 34.